



PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No. Q53219

Takeshi KAMIMURA

Appln. No. 09/244,419

Group Art Unit: 2622

Confirmation No. 3733

Examiner: NGUYEN, M. A. V.

Filed: February 4, 1999

For: IMAGE WORKFLOW SYSTEM

RECEIVED

DEC 23 2002

Technology Center 2600

APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 1.192

Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the provisions of 37 C.F.R. § 1.192, Appellant submits the following:

The following comprises the Appellant's Brief on Appeal from the rejection dated May 24, 2002, wherein claims 1-14 were finally rejected. This Appeal Brief is filed in triplicate and is accompanied by a Submission which includes the required appeal fee set forth in 37 C.F.R. § 1.17(c). Appellant's Notice of Appeal was filed on October 24, 2002. Therefore, the present Appeal Brief is timely filed.

I. REAL PARTY IN INTEREST

Appellant respectfully submits that the above-captioned application is assigned in its entirety to NEC CORPORATION, a company organized under the laws of Japan.

II. RELATED APPEALS AND INTERFERENCES

Appellant states that, upon information and belief, Appellant is not aware of any co-pending appeal or interference which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

This is an appeal from the rejection dated May 24, 2002, wherein claims 1-14 were finally rejected (*see* final Office Action dated May 24, 2002).

The present application was filed on February 4, 1999 with claims 1-13. Claim 14 was added in the Amendment filed on March 5, 2002. No amendments were made to the application after the March 5, 2002 Amendment.

Thus, claims 1-14 (*see* attached Appendix) are the claims currently on appeal, from the final rejections as set forth in the Office Action dated May 24, 2002.

IV. STATUS OF AMENDMENTS

All of the Amendments listed in section III above have been entered. No Amendments were filed after the final Office Action dated May 24, 2002.

V. SUMMARY OF THE INVENTION

Appellant's invention relates generally to an image workflow system, a method for managing image workflow, and a computer readable medium which stores a program operable for managing image workflow, for transferring operation document images through a network.

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An operation document image is obtained (*e.g.*, scanned) from an underlying operation document. *See, e.g.*, Appellant's specification, page 4, lines 14-16.

One objective achieved by Appellant's invention is that it is easy to transmit an operation document image without inclusion of a circulation route being necessary. *See, e.g.*, Appellant's specification, page 3, lines 1-4. Another objective achieved by Appellant's invention is an increase in the efficiency of an operation associated with a selected terminal, realized by observing the availability of each of the terminals and selecting one of the terminals as the destination of an operation document image based on the observed results. *See, e.g.*, Appellant's specification, page 3, lines 5-10.

An embodiment of Appellant's invention provides an image workflow system for use in transferring an operation document image through a network. *See, e.g.*, Appellant's specification, page 3, lines 11-22. The operation document image is extracted from (and thus corresponds to) an operation document, which includes a species, a destination, and an operation to be performed on the operation document. *Id.* The workflow system of this embodiment includes a workflow control table and an image identifying server. *Id.* The workflow control table (*see, e.g.*, Appellant's Fig. 4) stores the species, the destination, and the operation assigned to each operation document. *Id.* Furthermore, the image identifying server identifies the species of an operation document from its corresponding operation document image, so that the system can retrieve the identified species stored in the workflow control table, thereby automatically recognizing the stored destination and operation corresponding to the identified species. *Id.*

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As discussed above, the workflow control table is preliminarily prepared by storing the species, the destination, and the operation assigned to each operation document. *See, e.g.*, Appellant's specification, page 9, lines 6-14. Once the image identifying server has identified the species of an operation document, and the corresponding destination and operation have been retrieved from the workflow control table, the image identifying server generates a packet including the document image, the destination address, and the operation code, and transmits the packet to the destination, *i.e.*, the operation terminal where the document is subjected to the predetermined operation, as designated by the operation code. *See, e.g.*, Appellant's specification, page 7, lines 1-7.

Other embodiments of Appellant's invention include a method for managing image workflow and a computer readable medium which stores a program operable for managing image workflow.

VI. ISSUES

1. Whether claims 1-8, 10, and 12-14 are unpatentable over Yamakita, U.S. Patent No. 5,956,681 (hereinafter "Yamakita") under 35 U.S.C. § 103(a).
2. Whether claims 9 and 11 are unpatentable over the combination of Yamakita in view of Amberg et al., U.S. Patent No. 5,410,416 (hereinafter "Amberg") under 35 U.S.C. § 103(a).

VII. GROUPING OF CLAIMS

It is noted that the rejected independent claims 1, 12 and 13 stand or fall together. Additionally, claims 2-9 and 14 stand or fall together with claim 1, as their independent base claim.

However, claims 10 and 11 do not stand or fall together, but recite separately patentable features as set forth below (*see* respective pages 12-13 and 14 of Section VIII).

VIII. ARGUMENTS

1. Claims 1-8, 10, and 12-14 are patentable over Yamakita under 35 U.S.C. § 103(a)

Yamakita does not teach or suggest an image workflow system, comprising "a workflow control table which stores the species, the destination, and the operation assigned to each operation document" (claim 1; *see also* claims 12 and 13). To manage the transfer of an operation document image, through a network, wherein the operation document image corresponds to an operation document having a species, a destination, and an operation to be performed on the operation document, Appellant's invention provides a workflow control table that stores, in advance, the species, the destination, and the operation assigned to each operation document (*Id.*).

Yamakita describes a processing terminal registration table, this table is nothing like Appellant's workflow control table. *Cf., e.g.,* Fig. 10 of Yamakita and Appellant's Fig. 4. The processing terminal registration table of Yamakita is temporarily created in the speech control

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host unit 108 in response to a request from the mobile (source) terminal 101. *See, e.g.*, Fig. 1 of Yamakita. The processing terminal registration table of Yamakita stores the information of the mobile terminal 101 (*i.e.*, the source terminal which transmits the speech data to the speech control host unit 108), a text speech recognition/formatting start (or end) request command, and a format type data (Yamakita: col. 4, lines 54-64). Thus, as its name implies, the processing terminal registration table of Yamakita serves to identify the mobile (source) terminal that requests preparation of the formatted text data. The speech control host unit 108 generates formatted text data from the received speech data, according to the designated format type (*i.e.*, e-mail or facsimile), and sends the formatted text data back to the mobile terminal 101 by referencing the processing terminal registration table. Thereafter, the mobile terminal 101 can request that the speech control host unit 108 transmit the formatted text data, as an e-mail or a facsimile, to the intended recipient (Yamakita: col. 6, lines 19-28).

As evident from the above description, Yamakita's processing terminal registration table does not store, in advance, the species, the destination, and the operation assigned to each operation document. Instead, Yamakita describes temporarily registering an entry in the processing terminal registration table in response to every speech recognition/formatting request from a mobile terminal.

Furthermore, the information registered in the processing terminal registration table of Yamakita is not at all related to "the species, the destination, and the operation assigned to each operation document" (claims 1, 12, and 13). Indeed, Yamakita makes no mention of operation

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documents or operation document images, which is not surprising given that Yamakita is not directed to image workflow control/management. Instead, the information input into the speech control apparatus of Yamakita is speech data (Yamakita: Abstract; claims 1-12). Even though this speech data is eventually converted into formatted text data (*see, e.g.*, Abstract of Yamakita), this conversion of speech data into text data does not correspond to Appellant's recited operation document, which is not limited to text data (*see, e.g.*, Appellant's specification, page 6, lines 1-4; Fig. 2), and from which an operation document image is obtained (claims 1, 12, and 13).

Even further, as noted above, the information registered in the processing terminal registration table of Yamakita does not provide a destination for each operation document. The processing terminal registration table of Yamakita (*see, e.g.*, Fig. 10 of Yamakita) stores, *inter alia*, a terminal identification code and a transmission source IP address. The terminal identification code refers to a mobile terminal that transmits (*i.e., originates*) a text speech recognition/formatting start request command (Yamakita: col. 26, lines 62-66). Likewise, the transmission source IP address is the IP address for the aforementioned mobile terminal (Yamakita: col. 27, lines 10-14). Additionally, a destination IP address, which is sent along with each packet from the mobile terminal 101 to the speech control host unit 108 in Yamakita, only serves as the predetermined address of the speech control host unit 108 and is not stored in the processing terminal registration table (Yamakita: col. 4, lines 28-64). Furthermore, a destination for an e-mail or fax containing the formatted text data of Yamakita is not stored in

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the processing terminal registration table, but is instead recognized by the speech control host unit 108 from the inputted speech data (Yamakita: col. 5, lines 45-67).

Thus, Yamakita fails to teach or suggest an image workflow system, comprising "a workflow control table which stores the species, the destination, and the operation assigned to each operation document" (claim 1; *see also* claims 12 and 13).

Additionally, Yamakita fails to teach or suggest an image identifying server that (a) identifies the species of an operation document from an operation document image, (b) retrieves the species stored in the workflow control table in response to the identified species, to automatically recognize the destination and operation corresponding to the identified species, and (c) transmits the determined destination and operation to the network (claim 1; *see also* claims 12 and 13).

Yamakita describes a host unit that recognizes received speech data, converts the recognized speech data into text data, extracts a specific word from the converted text data, and generates formatted text data having a predetermined format by inserting the extracted word into a specified field of the converted text data, and transmits the generated formatted text through the network (Yamakita: col. 5, line 13 to col. 6, line 6).

(a) Yamakita fails to teach or suggest an image identifying server that identifies the species of an operation document from an operation document image

Yamakita fails to teach or suggest "an image identifying server for identifying the species of the operation document from the operation document image" (claim 1; *see also* claims 12 and 13). Indeed, Yamakita fails to teach or suggest the use of document images (*see, e.g.,*

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Appellant's specification, page 1, line 11 to page 2, line 23 for a general discussion of document images), let alone the use of an image identifying server for processing a document image. The received speech data of Yamakita is clearly different from an operation document image representing an operation document. An operation document image is "extracted from an operation document" (claims 1, 12, and 13) through the use of, for example, an image scanner or a digital camera. *See, e.g.*, Appellant's specification, page 4, lines 14-16; Fig. 1, element 11. The operation document image may be a binary image (black and white), a multi-valued image (gray scale), a color image, etc. *See, e.g.*, Appellant's specification, page 5, lines 6-8.

Yamakita describes a mobile terminal having a camera for inputting image data (*see, e.g.*, col. 7, lines 53-62; Fig. 2, element 202 of Yamakita). Yamakita fails to teach or suggest that the camera is used for producing an operation document image "extracted from an operation document" or that an image identifying server is provided "for identifying the species of the operation document from the operation document image".

Indeed, because Yamakita fails to teach or suggest the use of document images, it follows that Yamakita cannot and does not teach or suggest "an image identifying server for identifying the species of the operation document from the operation document image" (claim 1; *see also* claims 12 and 13). In Yamakita, the speech control host unit's 108 extraction of a specific word or words from the converted text data is not for purposes of identifying the species of an operation document image but is instead for purposes of populating particular fields, for example the "Cc:" field of an e-mail, with recognized speech data. (Yamakita: col. 5, lines 45-67). In

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Yamakita, the format type (*e.g.*, e-mail or facsimile) does not need to be recognized since it was already input by the user of the mobile terminal 101 (*Id.*).

Furthermore, the mere parsing of formatted text, as described in Yamakita, would not identify the species of an operation document according to Appellant's invention, since the species is represented in a non-text document, *i.e.* a document image. *See, e.g.*, Appellant's specification, page 5, lines 14-18. Furthermore, the species of an operation document, itself, may be represented in a non-textual manner (*e.g.*, by the location of a symbol, a title, lines, etc.). *See, e.g.*, Appellant's specification, page 6, lines 1-4; *also c.f.* Figs. 2 and 3.

(b) Yamakita fails to teach or suggest an image identifying server that retrieves the species stored in the workflow control table in response to the identified species, to automatically determine the destination and operation corresponding to the identified species

Yamakita fails to teach or suggest using an identified species of an operation document to automatically recognize a destination of the operation document (claims 1, 12, and 13). Instead, Yamakita describes automatically determining the contents of a recognized speech signal input from a mobile terminal and shaping the contents into text data of a format type designated from the mobile terminal, in particular, e-mail text data or fax text data (Yamakita: Abstract). The destination of the formatted text data, whether it is to be sent as an e-mail or a facsimile, is also recognized from the inputted speech data (Yamakita: col. 5, lines 45-67).

Furthermore, just as Yamakita fails to teach or suggest using an identified species of an operation document to automatically recognize a destination of the operation document, Yamakita also fails to teach or suggest using the identified species of an operation document to

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automatically recognize the operation to be performed on the operation document at the destination (claims 1, 12, and 13). The recited operation, which corresponds to the species retrieved from the workflow control table, represents an operation to be performed at the terminal corresponding to the recited destination. *See, e.g.*, Appellant's specification, page 6, lines 7-14. Yamakita is silent as to what happens to the formatted text once it is received at its destination, and thus makes no mention of an operation to be performed on an operation document at its destination. Indeed, absent disclosure to the contrary, in Yamakita, the fate of the transmitted data is in the hands of the recipient of the data, which is usually the case for a sent e-mail or fax. For example, the recipient of an e-mail may choose to read, delete, ignore, respond to, etc. the e-mail.

Even further, the aforementioned relationship between the recited destination and operation, *i.e.*, the operation is to be performed at the terminal corresponding to the destination (*see, e.g.*, Appellant's specification, page 6, lines 7-14), provides further proof that Appellant's invention would not have been obvious from Yamakita. In Yamakita, all of the processing occurs at a single terminal, *e.g.*, the speech control host unit 108 (Yamakita: col. 2, lines 34-42). Furthermore, this single terminal serves as a predetermined host unit, such that its location, which serves as the destination, is predetermined, that is always known (Yamakita: col. 4, lines 29-32; col. 11, lines 48-50). Thus, a destination and operation corresponding to each species would not need to be stored in the workflow control table.

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(c) Yamakita fails to teach or suggest an image identifying server that transmits the destination and operation, corresponding to the identified species, to the network

Because Yamakita fails to teach or suggest an image identifying server that retrieves the species stored in the workflow control table in response to the identified species, to automatically determine the destination and operation corresponding to the identified species, it follows that Yamakita also fails to teach or suggest an image identifying server that transmits the destination and operation, corresponding to the identified species, to the network. The mere transmission of formatted text data through the network of Yamakita does not teach or suggest the transmission of a destination of an operation document and an operation to be performed on the operation document at the destination, as determined from a workflow control table using an identified species of the operation document (claims 1, 12, and 13). To the contrary, in Yamakita, the only post-conversion transmission of data from the speech control host unit 108 to the network involves the transmission of the formatted text data to the mobile terminal 101 for (optional) further editing and the transmission of the formatted text data as an e-mail/fax to a recognized destination address/number (Yamakita: col. 6, lines 1-28; col. 6, lines 44-56 respectively).

With regard to claim 10, "the packet [containing the recognized result and the operation document image] is transmitted from a first terminal to a second terminal after processing of the packet at the first terminal according to the destination terminals specified in the packet when the plurality of destination terminals are associated with the single identified species in the workflow control table". Yamakita discloses recognizing speech data input from a mobile/portable terminal and generating text data formatted on the basis of the recognized result (Yamakita: col.

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1, lines 6-11). The generated text data can be sent to multiple recipients, for example, by e-mail. *See* col. 36, line 27 of Yamakita. Yamakita fails to teach or suggest transmitting a packet from a first terminal to a second terminal after processing of the packet at the first terminal according to the destination terminals specified in the packet when the plurality of destination terminals are associated with the single identified species in the workflow control table (claim 10). *See, e.g.*, Applicant's specification, page 9, line 27 to page 10, line 22. Indeed, Yamakita fails to teach or suggest a technique wherein operations may be performed sequentially across the terminals. *Id.*

Therefore, independent claims 1, 12, and 13, as well as dependent claims 2-8 and 14 (which incorporate all of the novel and unobvious features of claim 1) are patentable over Yamakita under 35 U.S.C. § 103(a), for at least the above exemplary reasons. Additionally, claim 10 is patentable over Yamakita under 35 U.S.C. § 103(a) at least by virtue of its dependency and the additional patentable features recited therein, as discussed above.

2. Claims 9 and 11 are patentable over the combination of Yamakita and Amberg under 35 U.S.C. § 103(a)

With regard to claim 9, Amberg describes an improved facsimile telecommunications system employing a fax gateway. Like Yamakita, Amberg is not directed to image workflow control/management. Thus, the improved fax delivery system of Amberg fails to teach or suggest the above-noted deficiencies of Yamakita. Therefore, claim 9, which incorporates all of the novel and unobvious features of claim 1, would not have been obvious from any reasonable combination of Yamakita and Amberg, at least for these reasons.

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With regard to claim 11, "the image identifying server observes efficiency of a plurality of terminals and selects one of the terminals which have the lowest efficiency as the destination terminal when the plurality of terminals are associated with the single identification species in the workflow control table". Yamakita makes no mention of observing the efficiency of a plurality of terminals, as acknowledged by the Examiner (final Office Action, page 6). As noted above, Amberg describes an improved facsimile telecommunications system employing a fax gateway. However, the efficiency achieved in Amberg by receiving a plurality of low-speed faxes, bundling them into a single fax for common distribution, and transmitting the single fax at high speed to the destination (*see* Abstract of Amberg) does not correspond to observing the efficiency of a plurality of terminals and selecting the terminal having the lowest efficiency as the destination terminal when the plurality of terminals are associated with the single identification species in the workflow control table. *See, e.g.*, Applicant's specification, page 10, line 27 to page 11, line 14; Fig. 5. Thus, claim 11 is patentable under 35 U.S.C. § 103(a) over Yamakita and Amberg.

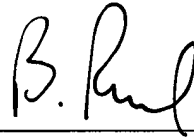
In summary, Appellant has invented a novel image workflow system, method of managing image workflow, and a computer readable medium which stores a program operable for managing image workflow, for use in transferring, through a network, an operation document image, extracted from an operation document that is featured by a species, a destination, and operation to be performed on the operation document, which would not have been obvious from any of the prior art references.

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The present Brief on Appeal is being filed in triplicate. Unless a check is submitted herewith for the fee required under 37 C.F.R. §1.192(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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APPENDIX

CLAIMS 1-14 ON APPEAL:

1. An image workflow system for use in transferring, through a network, an operation document image (or a work sheet image) extracted from an operation document which is featured by a species, a destination, and operation to be handled to the operation document, comprising:

a workflow control table which stores the species, the destination, and the operation assigned to each operation document; and

an image identifying server for identifying the species of the operation document from the operation document image to retrieve the species stored in the workflow control table in response to the identified species, to automatically recognize the corresponding destination and operation, and to transmit a recognized result to the network.

2. The system of claim 1, further comprising an input device coupled to the image identifying server to supply the operation document as the operation document image into the image identifying server.

3. The system of claim 1, wherein the recognized result is transmitted to the network together with the operation document image in the form of a packet.

4. The system of claim 3, further comprising at least one terminal which includes a destination terminal as the destination and which is coupled to the network.

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5. The system of claim 4, wherein the operation document image is processed on the basis of the operation designated by the recognized result, at the destination terminal which receives the operation document image.

6. The system of claim 1, wherein the image identifying server identifies the species of the operation document by using character recognition of an identification code representative of the species when the identification code is included in the operation document.

7. The system of claim 1, wherein the image identifying server identifies the species of the operation document by recognizing an image pattern particular to the operation document when an identification code which stands for the species is not included in the operation document.

8. The system of claim 5, wherein the destination terminal automatically activates a program performing the corresponding operation to the recognized result when the terminal receives the operation document image.

9. The system of claim 3, wherein the image identifying server transmits the packet to a plurality of destination terminals simultaneously when the plurality of destination terminals are associated with the identified species in the workflow control table.

10. The system of claim 3, wherein the packet is transmitted from a first terminal to a second terminal after processing of the packet at the first terminal according to the destination terminals specified in the packet when the plurality of destination terminals are associated with the single identified species in the workflow control table.

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11. The system of claim 1, wherein the image identifying server observes efficiency of a plurality of terminals and selects one of the terminals which have the lowest efficiency as the destination terminal when the plurality of terminals are associated with the single identification species in the workflow control table.

12. A method of managing image workflow for transferring, through a network, an operation document image extracted from an operation document which is featured by a species, a destination, and operation to be handled to the operation document, the method comprising the steps of:

storing in advance, the species, the destination, and the operation assigned to each operation document; and

identifying the species of the operation document from the operation document image to retrieve the stored species in response to the identified species, to automatically recognize the corresponding destination and operation, and to transmit a recognized result to the network.

13. A computer readable medium which stores a program operable for managing image workflow for transferring, through a network, an operation document image extracted from an operation document which is featured by a species, a destination, and operation to be handled to the operation document, the method comprising the steps of:

storing in advance, the species, the destination, and the operation assigned to each operation document; and

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identifying the species of the operation document from the operation document image to retrieve the stored species in response to the identified species, to automatically recognize the corresponding destination and operation, and to transmit a recognized result to the network.

14. The system of claim 1, wherein the destination is an IP address.